

REMARKS

The Examiner in the Office Action objected to the Abstract; objected to claims 4 and 6; rejected claims 2, 4, and 6-9 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,491,510 to Gove ("Gove"); and objected to claims 3 and 5 as being dependent on rejected base claims.

Applicant has provided a substitute Abstract and added new claims 10-12 in order to further claim patentable aspects of Applicant's invention.

Regarding the objection to the Abstract, Applicant has submitted herewith a substitute Abstract that obviates the grounds for objection.

Regarding the objection to claims 4 and 6, Applicant respectfully asserts that the term "ground point" is defined in the specification, for example, at page 5, lines 10-16 as follows:

overlap determination means compares displacement (displacement in the y axis direction, i.e., height, or the like) from a prescribed ground point (the x-z plane in a world coordinate system or the like) for a first reference point (the bottom edge, geometric center of gravity, or other point on the exterior of a subject) previously specified for a subject with displacement (physical object height, or the like) from a ground point for a second reference point (physical object top edge, geometric center, or the like) previously specified for a physical object

Applicants, therefore, assert that the term "ground point" as defined by Applicants specification meets the statutory requirements of 35 U.S.C. § 112, first and second paragraphs. Applicants, therefore, respectfully request that the objection to the claims be withdrawn.

Regarding the rejection of claim 2 as being unpatentable over Gove, Applicant respectfully traverses this rejection. Claim 2 is directed to a combination including an

overlap determination means for determining, on the basis of said shape data stored in the shape data memory means and position data for said subjects specified by said position data specification means, whether or not a physical object located between a visual point and the subject should overlap and be visible from the visual point.

The Examiner states at page 3 of the Office Action:

Gove does not explicitly teach an overlap determination means which determines whether a subject and a physical object are overlapped and generating virtual image using a show-through or non-show-through processing. However, since Gove teaches displaying a computer generated image of a subject which is obscured by a physical object . . . Gove inherently teaches an overlap determining means as claimed.

Applicant can find no basis in the Gove specification for the Examiner's assertions. The display of the image of the virtual object of Gove is made in only one form, as the virtual object and the physical object in Gove, by definition, always overlap. The processed image of Gove is disclosed as internal to the physical object, and therefore, is always obscured by the physical object. There is no disclosure of a determination of whether the physical object and the processed image overlap, as the virtual object being viewed is by definition obscured by, and therefore, always overlapping with the object. There is no disclosure that once the internal object is no longer obscured, i.e., the point at which the surgery uncovers the obscured object, that a determination is made that the object is no longer obscured. The aspect of the invention deemed by the Examiner as inherent to Gove, therefore, is neither disclosed nor inherent to the cited reference. Applicant, therefore, respectfully requests the rejection of claim 2 be withdrawn.

Further, claim 2 explicitly recites two different image formats for objects, show-through and non-show-through. As noted above, the processed object of Gove is by

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definition obscured during the entire process. Gove teaches at column 1, lines 32-35 that the invention "provid[es] visual information to a viewer without blocking the vision of the viewer" There is no teaching or suggestion of providing non-show-through images when the objects do not overlap as claimed. The provision of non-show-through objects would block the vision of the viewer, while the express purpose of the invention is to provide a view of both the processed image and the real world object. For this additional reason, Applicant asserts that claim 2 is patentable over the applied reference.

With respect to claim 4, Applicant asserts that this claim is patentable, at least, in view of its dependence from claim 2. Further Applicant asserts that Gove teaches neither the determination that an overlapping state exists or the specific recited method of making such a determination. The Examiner's reliance on the inference of the claimed material in the Gove disclosure is unfounded. M.P.E.P. § 2112 requires that "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flows from the teachings of the applied prior art." (emphasis in the original). There is no suggestion in the prior art that any component of the Gove apparatus must necessarily perform the claimed function. As no such showing has been made, Applicant respectfully requests the allowance of claim 4.

Regarding the rejection of claim 6, this claim is patentable, at least, in view of its dependence from claim 2.

Regarding claim 7, Applicant asserts that the Examiner has misconstrued both the teachings of the prior art and the requirements of inherency. The physical object that is viewed by the user in Gove is, in fact, a physical object. That object is not

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displayed as pixels as claimed, but rather is a real world physical object (see e.g., Fig. 5). The processed object is projected into the field of view of the user to overlap the physical object within that field of view.

Further, Applicant asserts that there is no suggestion in the prior art that the claimed display method is inherent to Gove as suggested by the Examiner. That a claimed method is one possible solution to a problem does not therefore support a conclusion that the solution chosen is inherent.

Regarding claims 8 and 9, Applicant respectfully asserts that these claims are patentable over the applied reference for essentially the same reasons expressed with respect to claim 2.

Regarding new claims 10-12, these claims further recite that the subject is being operated by the user. Gove fails to teach or suggest that either the patient or the object internal to the patient is controlled by the user, and so, for this additional reason, claims 10-12 are patentable over the applied reference.

In view of the foregoing remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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